

## MODEL 820M1 ACCELEROMETER



### SPECIFICATIONS

- Piezoelectric Accelerometer
- $\pm 25g$  to  $\pm 100g$  Dynamic Ranges
- Wide Bandwidth to 6000Hz
- Circuit Board Mountable

The Model 820M1 is a low cost, board mountable accelerometer designed for embedded condition monitoring and predictive maintenance applications. The piezo-electric accelerometer is available in ranges from  $\pm 25g$  to  $\pm 100g$  and features a flat frequency response up to  $>6kHz$ . Featuring stable piezo-ceramic crystals in shear mode, the accelerometer incorporates an amplified  $\pm 1.25V$  output with optimum measurement resolution.

### FEATURES

- Amplified  $\pm 1.25V$  Signal Output
- 2.8 to 5.5Vdc Excitation Voltage
- Hermetically Sealed
- Piezo-Ceramic Shear Design
- $-40^{\circ}$  to  $+125^{\circ}C$  Operating Range

### APPLICATIONS

- Machine Health Monitoring
- Preventive Maintenance Installations
- Embedded Vibration Monitoring
- Impact & Shock Monitoring

## MODEL 820M1 ACCELEROMETER

### PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 3.3Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

#### Parameters

##### DYNAMIC

	±25	±50	±100	Notes
Range (g)				
Sensitivity (mV/g)	50.0	25.0	12.5	±30%
Frequency Response (Hz)	2-6000	2-6000	2-6000	±1dB
Resonant Frequency (Hz)	>30000	>30000	>30000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	2000	2000	2000	
Residual Noise (g RMS)	0.0026	0.0030	0.0032	2Hz to 10kHz
Spectral Noise, 10Hz (µg√Hz)	160	160	160	
Spectral Noise, 100Hz (µg√Hz)	40	40	40	
Spectral Noise, 1kHz (µg√Hz)	16	16	16	

##### ELECTRICAL

Excitation Voltage (Vdc)	2.8 to 5.5			
Bias Voltage (Vdc)	Excitation Voltage / 2			
Full Scale Output Voltage (V)	±1.25			
Total Supply Current (µA)	22			
Output Impedance (Ω)	<100			
Insulation Resistance (MΩ)	>100			@100Vdc
Shielding	100%			
Warm-up Time (msec)	30			

##### ENVIRONMENTAL

Temperature Response (%)	-20/+30 from -40°C to +125°C
Operating Temperature (°C)	-40 to +125
Storage Temperature (°C)	-40 to +125
Humidity	Hermetically Sealed

##### PHYSICAL

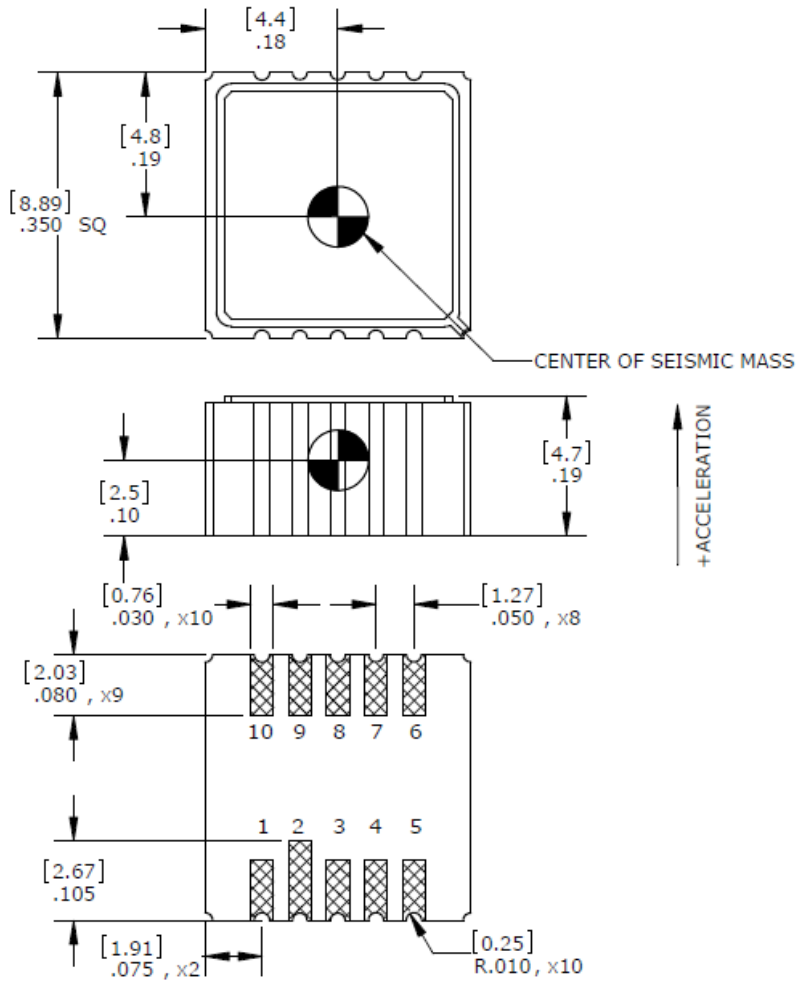
Sensing Element	PZT (Lead Zirconate Titanate)
Case Material	Ceramic Base and Cover
Weight (grams)	1.0
Mounting	Solder Reflow

**Calibration supplied:** CS-SENS-0100 NIST Traceable Amplitude Calibration at 80Hz

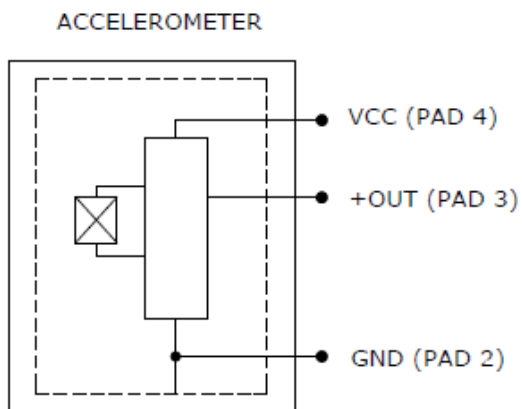
The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. TE Connectivity reserves the right to make changes without further notice to any product herein. TE Connectivity makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does TE Connectivity assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. TE Connectivity does not convey any license under its patent rights nor the rights of others.

# MODEL 820M1 ACCELEROMETER

## DIMENSIONS



## SCHEMATIC



## ORDERING INFORMATION

820M1-GGGG

| \_\_\_\_\_ Range (0100 is 100g)

Part Number	Range
820M1-0025	25g
820M1-0050	50g
820M1-0100	100g

### NORTH AMERICA

Tel +1 800 522 6752  
[Customercare.hmpt@te.com](mailto:Customercare.hmpt@te.com)

### EUROPE

Tel +31 73 624 6999  
[Customercare.lcsb@te.com](mailto:Customercare.lcsb@te.com)

### ASIA

Tel +86 0400 820 6015  
[customercareshzn@te.com](mailto:customercareshzn@te.com)

### [te.com/sensorsolutions](http://te.com/sensorsolutions)

TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2018 TE Connectivity Ltd. family of companies All Rights Reserved.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)